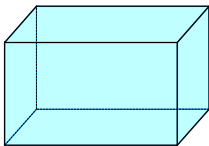
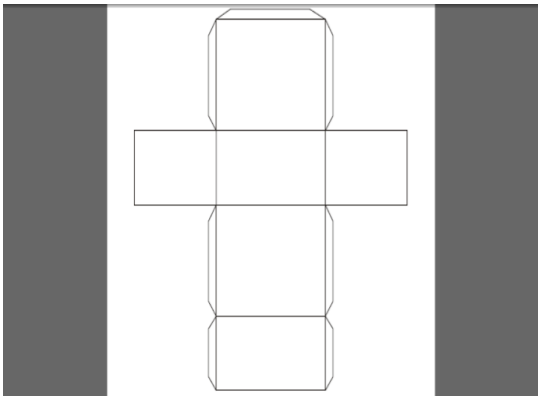


9-2 and 9-4  
Surface Area and  
Volume of  
Prisms



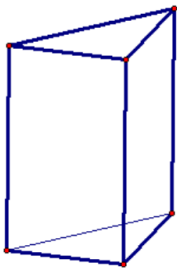
Surface Area = sum of area of  
its faces

Net of a rectangular prism



Lateral faces of a prism--faces that are not the bases

Lateral Area--sum of the areas of the lateral faces



lateral edge

Lateral Area  
 $LA = p \times h$

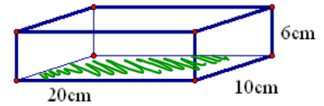
$P =$   
 perimeter of  
 base

Surface Area  
 $SA = LA + 2B$

$B \Rightarrow$  area of  
 base

Volume =  $B \times h$

Example:



$$p = 20 + 10 + 20 + 10 = 60 \text{ cm}$$

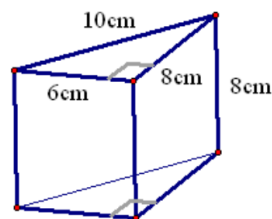
$$B = 20 \cdot 10 = 200 \text{ cm}^2$$

$$LA = 60 \cdot 6 = 360 \text{ cm}^2$$

$$SA = LA + 2B = 360 + 2(200) = 760 \text{ cm}^2$$

$$V = 200 \cdot 6 = 1200 \text{ cm}^3$$

Example:



$$p = 6 + 8 + 10 = 24 \text{ cm}$$

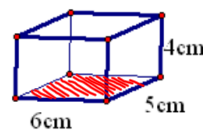
$$B = \frac{1}{2}bh = \frac{1}{2}6 \cdot 8 = 24 \text{ cm}^2$$

$$LA = 24 \cdot 8 = 192 \text{ cm}^2$$

$$SA = 192 + 2(24) = 240 \text{ cm}^2$$

$$V = 24 \cdot 8 = 192 \text{ cm}^3$$

Do:



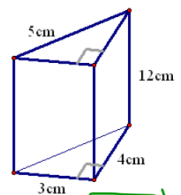
$$p = 6 + 5 + 6 + 5 = 22 \text{ cm}$$

$$B = 6 \cdot 5 = 30 \text{ cm}^2$$

$$LA = ph = 22 \cdot 4 = 88 \text{ cm}^2$$

$$SA = LA + 2B = 88 + 2(30) = 148 \text{ cm}^2$$

$$V = Bh = 30 \cdot 4 = 120 \text{ cm}^3$$



$$p = 5 + 4 + 3 = 12 \text{ cm}$$

$$B = \frac{1}{2}34 = 6 \text{ cm}^2$$

$$LA =$$

$$SA =$$

$$V =$$

Assignment:

p487-488

1-4, 8-10, 14-16, [17-19\(Find p, B, LA, and SA\)](#)

p503

11-13